

## Remarks

Claims 1 and 9 are amended simply to define the acronyms DTX and CONT, as suggested by the examiner. We submit this amendment is not necessary for patentability, but simply makes the claim easier to read, and no change in meaning or scope is made, or intended.

Claims 1-7 and 9-15 are rejected under s. 103(a) as being unpatentable over Yao in view of Yu. We respectfully disagree. We respectfully submit that neither reference, either together or combined, teach every element of the claims. Without limiting the generality of the foregoing, the Examiner has already admitted that YAO does not teach step (b) of claim 1. In brief, as far as understood, the rejection is premised on 2 conclusions: first, it is alleged that YAO teaches everything but step (b); and second, it is alleged that Yu teaches step (b) and what Yu teaches can be combined with Yao in an obvious manner to achieve the claimed invention. With respect, both allegations are false.

Regarding the first allegation, the examiner alleges that YAO (and specifically paragraphs 46, 32 and 36) teaches step (d) of the claim. With respect, it simply does not. Yao does not teach determining whether said received frame is an erasure, a DTX mode frame or a CONT mode frame. Furthermore, even if, *arguendo*, paragraphs 46, 32 and 36 does teach such a determination (which is not admitted, but expressly denied), Yao certainly does not do so based on said CRC value and said mean absolute LLR value, as claimed.

The cited paragraphs (and Yao generally) are not even related to the claimed invention. Yao et al teaches how to efficiently generate turbo encoded bits, by teaching how to efficiently generate memory addresses for turbo code interleaving using a number of look-up tables. The problem we are dealing with is a totally different problem. The problem we are addressing is how to determine whether a received and decoded frame has been corrupted (or lost), or whether it was sent or not sent.

We note that paragraph 46 is cited because it mentions the word erasure. The cited passage actually states: "The LLR for an erasure (i.e., **punctured bit**) is indicative of equal confidence in **the bit** being a zero or a one (i.e., LLR=0) (emphasis added)." However, in this paragraph (and in Yao generally), erasure is clearly referring to a punctured **bit**, and not to an

erasure(e.g., corrupted) frame, as claimed. Furthermore, we note that this is true of the only other 2 places Yao mentions erasure, namely paragraphs 46 and 52. Thus Yao does not determine if a received frame is an erasure, as claimed.

Paragraph 32 discusses discontinuous transmission bits but in Yao these are used for rate matching, such that "DTX bits may then be inserted to the multiplexed radio frames such that the number of bits to be transmitted matches the number of bits available on the physical channel(s) used for the data transmission, in block 234." (see paragraph 35 and Figure 2). However, neither paragraph 32, 36 or Yao generally discusses or teaches how to detect DTX frames.

Accordingly, even though paragraph 36 mentions transmitted bits, and non-transmitted bits, the examiner's allegation that "detection of non-transmitted bits is interpreted as determination of a DTX mode frame, and detection of transmitted bits is interpreted as determination of a CONT mode frame" is simply not an interpretation consistent with the teachings of Yao.

Furthermore, while paragraph 37 does disclose the use of CRC bits, it should be noted that Yao only teaches the use of CRC bits for the conventional use, which is to check for errors. However, on its own, a CRC check as contemplated by Yao can not distinguish between an erased frame (a frame with non-correctible errors) and a DTX frame, as both will fail a CRC check.

Regarding the second allegation, we respectfully submit that a person skilled in the art would not think to combine Yao and Yu as suggested by the examiner, as neither addresses (or even mentions or suggests) the problem solved by the claimed invention, and the improvement represented by the claimed invention is "more that the predictable use of prior art elements according to their established functions."

Furthermore, we disagree that Yu teaches element (b) of the claim. The cited passage of Yu discusses a minimum absolute LLR, not a mean absolute LLR as claimed. We are not certain why the examiner is equating Yu's teaching of an absolute LLR with a mean absolute LLR.

In any event, even if, *arguendo*, Yu can be combined with Yao to replace Yao's teaching of using an LLR with Yu's teaching of an absolute LLR, the combination still does NOT teach the claimed invention. Neither reference teaches using LLR to determine whether said received frame is an erasure, a DTX mode frame or a CONT mode frame.

Accordingly, and for at least the reasons provided above, it is respectfully submitted that the rejection fails to establish a prima facie case of obviousness, and therefore the rejection to claims 1-7 and 9-15 should be withdrawn. The rejection to claim 8 should also be withdrawn for the same reasons.

No fee is believed due for this submission. However, Applicant authorizes the Commissioner to debit any required fee from Deposit Account No. 501593, in the name of Borden Ladner Gervais LLP. The Commissioner is further authorized to debit any additional amount required, and to credit any overpayment to the above-noted deposit account.

Respectfully submitted,

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